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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,359	12/01/2003	Carlambrogio Bianchi	60246-306;10766	1318

26096 7590 04/21/2004

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BIRMINGHAM, MI 48009

EXAMINER
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DUONG, THO V

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/725,359	<b>Applicant(s)</b> BIANCHI ET AL.	
	<b>Examiner</b> Tho v Duong	<b>Art Unit</b> 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the second portion" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 is further rejected, as best can be understood by the examiner in which the second portion is assumed to be the portion of air that is discharged in a second direction.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,6, and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Lendell Martin Sr. (US 5,062,280). Martin discloses (figures 2 and 3) a ducted heating and cooling unit comprising at least one fan (12); a bent coil (24) disposed downstream from the fan; the bent coil (24) having a coil surface through which outlet air is discharged in a first direction

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and a second direction different than the first direction; the first direction is longitudinal (toward end of the duct at 28) and the second direction is at an angle with respect to the first direction (on the side of the duct at 28); at least a portion of the coil is curved and has a V-shape profile; a separation wall (22) disposed between the fan and the bent coil; and the duct (20) includes at least one side opening (18) substantially aligned with the second direction.

Claims 1-6,10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Giberson et al. (US 4,658,602). Giberson discloses (figures 1-3 and column 1, lines 45-58) a ducted heating and cooling unit comprising at least one fan (20); a bent coil (14) in semi-circular shape disposed downstream from the fan; the bent coil having a coil surface through which outlet air is discharged radially. Therefore, the discharged air includes a first direction and a second direction different than the first direction. Giberson further discloses (figures 1-3) a plurality of vertical fin attached on the coil so that the outlet air passing perpendicularly through the coil surface in radial direction from the fan. As regarding claim 2, the discharged air that flows toward the mid section of the circular bent coil is interpreted to be in longitudinal direction. Therefore, other directions must be angled with respect to the longitudinal direction.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lendell Martin in view of D. E. French (US 1,787,444). Martin substantially discloses all of applicant claimed invention as discussed above except for the limitation that there is a plurality of blowers in the system. French discloses (figure 2) a heat exchanger that has a coil construction (21) disposed within a duct (33) and a plurality of blowers (13) are used to provide air passing through the coil for the purpose of passing more air through the heat exchanger core so that the heat transfer rate of the heat exchanger is increased. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use French's teaching in Martin heat exchanger to pass more air through the heat exchanger so that heat transfer rate of the heat exchanger is increased.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. P. Brandimarte (US 2,995,906) discloses a compact cooling unit.

Ares (US 3,759,321) discloses a condenser coil apparatus.

Cox et al. (US 5,228,197) discloses a refrigerant coil fabrication method.

E. W. Roessler (US 2,022,523) discloses an air conditioning unit that has a plurality of fans.

Sasaki (US 5,947,195) discloses a multi-tube heat exchanger having a plurality of outlets discharging air.

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



TD

April 15, 2004



Tho Duong

Patent Examiner.